This pathology presents challenges from the standpoints of diagnosis and treatment.

Methods: This case report describes a 66-year-old man with the unexpected diagnosis of angiosarcoma of his native aorta seven years following endograft repair of his abdominal aortic aneurysm as a workup for a lytic lumbar spinal process. We then review the world surgical literature for occurrence, diagnosis and management of aortic AS.

Results: Primary AS of the aorta is an exceedingly rare malignancy reported less than 50 times in the surgical literature. These lesions can be difficult to diagnose and prognosis remains poor. Animal models suggest a relationship between foreign body reaction associated with implanted materials and sarcomas, but this possible relation has not been reviewed in human studies.

Conclusion: While a rare occurrence, primary angiosarcoma can develop in any vascular endothelial surface and since native aortic tissue is retained following endovascular repair of an abdominal aortic aneurysm (AAA), the treating physician should have an awareness of this pathology and entertain this diagnosis as appropriate.

Is There A High Failure Rate For EVAR With Large Diameter Devices?

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Objective: Endovascular aneurysm repair (EVAR) for large aortic necks is felt to be associated with potentially high rates of proximal failure. Since approval of the 36 mm Zenith endograft in 09/2006, there remains a paucity of data related to outcomes with large diameter devices. The purpose of this study is to evaluate the outcomes of EVAR using the 36 mm Zenith endograft.

Method: A retrospective review at a single institution was performed for patients treated with a 36 mm Zenith endograft from 10/2006 to 04/2010. Demographics, preoperative imaging, and patient outcomes were analyzed.

Results: During the study period, 464 EVARs were performed with 31 (6.7%) patients undergoing standard elective EVAR with a 36 mm Zenith endograft. There were 26 (84%) males and the mean age was 75.9 (range 62-93) years. The mean preoperative maximum aneurysm diameter was 62.5 (range 48-85) mm. All had proximal aortic neck diameters between 29-33 mm. There was 100% technical success. Two patients required an iliac conduit for endograft delivery. Two patients required proximal aortic cuff placement. Intraoperative access-related complications (6, 19%) included 2 femoral artery repair, 2 iliac artery dissection requiring stent placement, and 2 patients with both. The mean length of stay was 4.2 days. Systemic complications occurred in 4 patients (13%) with no deaths within 30 days. On follow-up, 14 patients (45%) died at a mean of 15.0 months after their EVAR and the remaining 17 patients (55%) are alive at a mean of 37.6 months. There was no conversion, aneurysm rupture or aneurysm-related mortality. Secondary interventions were required in 3 patients. Two were treated with iliac limb placement for distal type Ib endoleaks at 8 and 29 months. One required embolization of a type II endoleak with aneurysm expansion at 25 months. There are no other type I/ III endoleaks or migration. Two patients have type II endoleaks without aneurysm expansion.

Conclusions: EVAR with a 36 mm Zenith endograft is not associated with an increased incidence of proximal type Ia endoleak or device migration. However, the need for a larger delivery sheath can be associated with more access-related complications. The midterm results demonstrate this to be a safe and effective device for treatment of abdominal aortic aneurysms with large necks.

Endovascular Repair of Ruptured Iliac Aneurysm With Ileocaval Fistula With Iliac Vein Disruption, Using Staged Aortic and iliocaval Stent-Grafting

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A 59-year-old morbidly obese gentleman presented with a ruptured left common iliac artery aneurysm. His symptomats also included CHF, tense Lt lower extremity edema, and azotemia. CT showed contained rupture of an 8 cm Lt common iliac artery aneurysm and an aortoilio-caval fistula. This was initially treated endovascularity using a modular Gore Excluder device with coil embolization of the Lt hypogastric artery. The patient presented 2 weeks later with new worsening extremity symptoms. CT showed distal migration of the hypogastric coils with a type II endoleak as well as a persistent AV

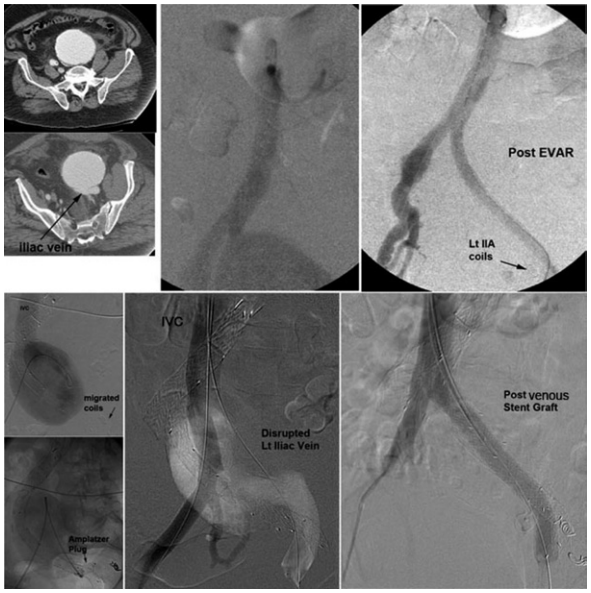

Fig.

fistula. We used a transvenous approach through the fistuous communication (Fig) to occlude the proximal hypogastric artery using an Amplatzer plug occluder. Venography revealed disruption of the Lt iliac vein which was treated using a Gore Excluded limb placed via a transjugular venous approach. The patient's symptoms improved dramatically and he has continued to do well on his last followup more than two years later.

Case Series: Anatomic Popliteal Entrapment Syndrome Is Often a Difficult Diagnosis

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Objective: Three patients were ultimately diagnosed with anatomic popliteal entrapment syndrome after prior interventions failed to improve their symptoms.

Case 1: A 19-year-old male had a 2-year history of bilateral calf pain that prevented playing sports. Prior assessment and therapy included spine and lower limb MRI, EMG, bilateral anteriolateral fasciotomies, and muscle biopsy. Interpretation of MRA and duplex ultrasound elsewhere was functional entrapment. Dorsalis pedis pulses were 2+ in neutral position but absent with plantarflexion. Angiography confirmed bilateral popliteal occlusion with forced standing plantarflexion. Surgical explorations revealed type III popliteal entrapment; staged bilateral release of these accessory slips was performed.

Case 2: A 15-year-old female high school athlete with an 8-month history of right lower extremity pain and paresthesia on exertion was treated for exertional compartment syndrome by 4-compartment fasciotomy with temporary relief, but symptoms returned within 3 months. MRA demonstrated type I popliteal entrapment, and surgical intervention with division of the medial gastrocnemius head and interposition vein graft of the popliteal artery have provided continued relief of all symptoms at 18 months.

Case 3: A 55-year-old male presented with a 6 month history of right calf pain during intense cycling. Angiography showed normal ileofemoral vessels but right popliteal occlusion with plantarflexion. Prior popliteal artery angioplasty was unsuccessful. Surgical exploration revealed an overlying fascial band in the distal thigh and adventitial cystic disease distally; band interruption, cyst excision, and vein patch angioplasty at the distal site were performed. He is doing well.

Conclusion: The diagnosis of anatomic popliteal entrapment can be elusive, and may be difficult if a prior diagnosis of compartment syndrome or functional popliteal entrapment is made. Forced plantarflexion against resistance may be valuable in making the diagnosis.